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REMARKS

Claims 1-22 are all the claims presently pending in the application. Claims 1, 3, 7, 11, and 17 are amended to more clearly define the invention. Claims 1, 3, 7, 11, and 17 are independent.

Applicant appreciates the courtesies extended to the Applicant's representative during a telephone interview on August 10, 2005. During the telephone interview, Examiner Lau agreed that the Schrock reference does not teach or suggest the features of the claimed invention including a computer that: 1) determines a high level exists when the first voltage and the second voltage are both equal to or higher than a predetermined threshold, 2) determines a low level exists when the first voltage and the second voltage are both lower than the predetermined threshold, and 3) determines a same level as a preceding determination exists when the first voltage is equal to or higher than the predetermined threshold and the second voltage is lower than the predetermined threshold, as recited by independent claims 11 and 17.

However, during the telephone interview, Examiner Lau requested that Applicant amend the independent claims to clarify that the level determination remains the same as an earlier determination, rather than an immediately preceding determination. This amendment amends the independent claims in accordance with Examiner Lau's very helpful suggestion.

These amendments are made only to more particularly point out the invention for the Examiner and not for narrowing the scope of the claims or for any reason related to a statutory requirement for patentability.

Applicant also notes that, notwithstanding any claim amendments herein or later during prosecution, Applicant's intent is to encompass equivalents of all claim elements.

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Entry of this §1.116 Amendment is proper. Since the Amendments above narrow the issues for appeal, since such features and their distinctions over the prior art of record were discussed earlier, and since Examiner Lau specifically requested the above amendments, such amendments do not raise a new issue requiring a further search and/or consideration by the Examiner. As such, entry of this Amendment is proper and Applicant earnestly solicits entry. No new matter has been added.

Applicant gratefully acknowledges that claims 1-10 are allowed. However, Applicant respectfully submits that all of the claims are allowable.

Claims 11 - 22 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Schrock reference

This rejection is respectfully traversed in the following discussion.

I. THE INFORMATION DISCLOSURE STATEMENT

The Examiner again fails to indicate consideration of the foreign language references which were submitted in the Information Disclosure Statement that was filed on February 5, 2004.

In particular, Examiner Lau alleges that “the information disclosure statement filed on 4-12-2005 fails to comply with 37 CFR 1.98(a)(2)” because “Item 10-197572 (Japan) is missing from the application file.” (Emphasis original).

Firstly, Applicant did not file an Information Disclosure Statement on April 12, 2005, as alleged by the Examiner. Rather, Applicant filed an Amendment on April 12, 2005, which responded to Examiner Lau’s allegation that the Information Disclosure Statement that was filed on February 5, 2004, did not include legible copies of France 2817970, the European

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Search Report dated January 14, 2004, and "Voltage comparator circuit, IBM Vol. No. 4, Sept. 1974, pp 1151 - 1152. In particular, the Examiner noted that these references "are missing from the application."

Therefore, to assist the Examiner, Applicant enclosed a re-submission of the February 5, 2004, Information Disclosure Statement including the references that the Examiner alleged were missing from his file and another copy of a form PTO-1449, for the Examiner's convenience.

Secondly, Applicant notes that Examiner Lau has indicated that Examiner Lau considered the Japan 10-197572 reference by providing the Examiner's initials next to the citation of the Japan 10-197572 reference on a Form PTO-A820 on December 10, 2004.

In any case, given the Examiner's statement that the Japan 10-197572 reference is "missing from the application file," Applicant encloses yet another copy of that reference for the Examiner's application file.

Further, Examiner Lau alleges that "the information disclosure statement filed on 4-12-2005 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance." In this regard, the Examiner notes that the France FR 2 817 970 reference was merely placed in the application file and was not considered.

In response, Applicant respectfully submits that Examiner Lau appears to be under the mistaken understanding that the Examiner does not have to indicate consideration of the France FR 2 817 970 reference.

Applicant respectfully directs the Examiner's attention to 37 C.F.R. § 1.98(3) which merely requires a concise relevancy of the relevance of each publication that is not in the English language. M.P.E.P. § 609A(3) states:

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“Where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevancy can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office.”

The Information Disclosure Statement that was filed on February 5, 2004, clearly pointed out that the information listed was cited in an action by a foreign patent office in a counterpart foreign application and included an English-language version of the action which indicates the degree of relevance found by the foreign office.

In this particular instance, the February 5, 2004, Information Disclosure Statement cited and enclosed a copy of a European Search Report from a counterpart European application which cited the France FR 2 817 970 reference.

Therefore, Applicant clearly satisfied “the requirement for a concise explanation of relevancy can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office” as set forth by M.P.E.P. § 609A(3).

Therefore, Applicant respectfully requests, for the clarity of the record, that the Examiner indicate consideration of all references that were submitted in the Information Disclosure Statement that was filed on February 5, 2004.

Lastly, should Examiner Lau continue to experience difficulties which Examiner Lau believes will prevent Examiner Lau from indicating consideration of all of the references that were submitted in the Information Disclosure Statement that was filed on February 5,

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2004, Applicant respectfully requests that Examiner Lau immediately contact Applicant's representative at the telephone number listed below.

II. THE CLAIMED INVENTION

An exemplary embodiment of the claimed invention, as defined by independent claim 11, for example, is directed to device for setting a hysteresis characteristic with respect to an input signal. The device includes a voltage divider receiving the input signal and outputting the input signal as a first voltage and outputting a second voltage that is less than the first voltage, and a computer. The computer determines a high level exists when the first voltage and the second voltage are both equal to or higher than a predetermined threshold, determines a low level exists when the first voltage and the second voltage are both lower than the predetermined threshold, and determines a same level as a preceding determination exists when the first voltage is equal to or higher than the predetermined threshold and the second voltage is lower than the predetermined threshold.

Conventional hysteresis characteristic setting circuits include a logic circuit or a comparator circuit that uses a Schmitt trigger that includes operational amplifiers or transistors and resistors. Thus, these conventional circuits have a large number of components, which increases production costs and requires a large installation space.

In stark contrast, the present invention provides a hysteresis characteristic setting circuit that includes a computer that determines a high level exists when the first voltage and the second voltage are both equal to or higher than a predetermined threshold, determines a low level exists when the first voltage and the second voltage are both lower than the predetermined threshold, and determines a same level as a preceding determination exists

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when the first voltage is equal to or higher than the predetermined threshold and the second voltage is lower than the predetermined threshold. In this manner, the present invention provides a hysteresis characteristic setting circuit that includes fewer components than the conventional hysteresis characteristic setting circuits. (Page 3, lines 8-12).

III. THE PRIOR ART REJECTION

The Examiner alleges that the Schrock reference teaches the claimed invention. Applicant submits, however, that there are elements of the claimed invention which are neither taught nor suggested by the Schrock reference.

The Examiner's alleged significance of the Schrock reference in the May 16, 2005, office action is murky, at best, as the Office Action did not explain the pertinence of the particular portions of the Schrock reference to the specific elements which are recited by the claims being rejected.

In particular, the Examiner's rejection fails to comply with 37 C.F.R. §1.104(c)(2) which requires that:

"the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified." (Emphasis added).

In this case, the Examiner clearly failed to cite the particular portions of the Schrock reference which may have been relied upon.

To assist Applicants' understanding, Applicants hereby respectfully request that the Examiner comply with the requirements of 37 C.F.R. §1.104(c)(2) by explaining in detail the correspondence between the specific features recited by claims 11-22 and the particular

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portions of the Schrock reference.

Further, Applicant notes that Examiner Lau's rejection also fails to comply with M.P.E.P. § 707.05, which states:

"During the examination of an application or reexamination of a patent, the examiner should cite appropriate prior art which is nearest to the subject matter defined in the claims. When such prior art is cited, its pertinence should be explained"

In this particular instance, Examiner Lau clearly fails to explain the pertinence of the Schrock reference to the claims. Rather, Examiner Lau merely regurgitates the language of the claims and only vaguely refers to the Schrock reference.

To further the prosecution of this application, however, the Applicant has closely reviewed the Schrock reference to address the clear differences between the Schrock reference and the claims.

As agreed by Examiner Lau during the August 10, 2005, telephone interview, the Schrock reference does not teach or suggest the features of the claimed invention including a computer that: 1) determines a high level exists when the first voltage and the second voltage are both equal to or higher than a predetermined threshold, 2) determines a low level exists when the first voltage and the second voltage are both lower than the predetermined threshold, and 3) determines a same level as a preceding determination exists when the first voltage is equal to or higher than the predetermined threshold and the second voltage is lower than the predetermined threshold, as recited by independent claims 11 and 17.

Indeed, the Schrock reference does not teach or suggest making any determination at all, let alone a determination regarding two voltages.

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Further, the Schrock reference does not teach or suggest any predetermined threshold at all, let alone making any determination based upon a predetermined threshold.

Rather, the Schrock reference discloses a driver circuit for a camera auto-focus laser diode with a provision for fault protection.

In particular, the Schrock reference discloses a laser diode driver circuit in Figure 2. The laser diode driver circuit receives an input signal Vset that sets an On/Off condition for the laser diode. The only voltage driver that is disclosed by the Schrock reference is in a feedback signal sensing circuit 40 and includes resistors 41 and 42 (col. 4, lines 4-6). The voltage divider network 41 and 42 is connected to an RC charging circuit that includes a resistor 43 and a capacitor 44. The RC charging circuit provides an output signal that is a modified signal V'set. (Col. 4, lines 6-10).

Thus, the only thing that is disclosed by the Schrock reference, which may possibly correspond to the claimed input signal (first voltage) is the input signal Vset.

Further, the only thing that is disclosed by the Schrock reference, which may possibly correspond to a second voltage that is output by a voltage divider is that voltage which is found at the node between the resistors 41 and 42.

Obviously, the Examiner cannot possibly allege that the V'set signal corresponds to a voltage output by a voltage divider circuit. Clearly, the V'set signal is not output by a voltage divider. Rather, the V'set signal is output by an RC charging circuit. Therefore, the Examiner cannot allege that the V'set signal corresponds to a second voltage output from a voltage divider because the V'set signal is not output by a voltage divider, rather, the V'set signal is output by an RC charging circuit.

The Examiner appears to refer to Figure 3 and signals a, b, and c within Figure 3 of

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the Schrock reference in a failed attempt to allege that this discloses the claimed features of 1) determining that a high level exists when a first voltage and a second voltage are both equal to or higher than a predetermined threshold; 2) determining that a low level exists when the first voltage and the second voltage are both lower than the predetermined threshold; and 3) determining a same level as a preceding determination exists when the first voltage is equal to or higher than the predetermined threshold and the second voltage is lower than the predetermined threshold, as recited by independent claims 11 and 17.

However, contrary to this confused reference to Figure 3 of the Schrock reference, Figure 3 of the Schrock reference clearly discloses that signal "a" refers to the input signal V_{set} , signal "b" corresponds to the output from the RC charging circuit, and signal "c" corresponds to the feedback signal V_{pd} .

Figure 3 of the Schrock reference illustrates operation of the laser diode control circuit that is illustrated in Figure 2. In particular, Figure 3 illustrates that the V'_{set} signal follows the input signal V_{set} , but has a slow rise that is determined by the RC charging circuit and a rapid fall due to the discharge effect of a diode 45.

Figure 3 further illustrates the affects on the output signal STOP by V_{set} and V_{pd} , and in turn upon laser current "e".

Figure 3 clearly illustrates the affect of summing the V'_{set} signal with the V_{pd} signal at the comparator 48 and that the V'_{set} signal and the V_{pd} signals tend to cancel each other out.

If the laser diode 24 operates normally, the feedback signal V_{pd} is provided and the feedback signal V_{pd} cancels out the V'_{set} signal. Thus, the comparator holds a non-conducting state which allows the laser current e to be provided to the laser diode 2. (Col. 4,

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lines 25 - 40).

If, however, the laser diode 24 does not operate normally, the feedback signal Vpd does not cancel out the V^{*}set signal and the comparator 48 then conducts and, therefore, terminates drive current to the laser diode 24 (col. 4, lines 41 - 62).

Clearly, the Schrock reference does not teach or suggest including a computer that: 1) determines a high level exists when the first voltage and the second voltage are both equal to or higher than a predetermined threshold, 2) determines a low level exists when the first voltage and the second voltage are both lower than the predetermined threshold, and 3) determines a same level as a preceding determination exists when the first voltage is equal to or higher than the predetermined threshold and the second voltage is lower than the predetermined threshold, as recited by independent claims 11 and 17.

Further, the Schrock reference clearly does not teach or suggest making any determination at all, any predetermined threshold at all, let alone making any determination based upon a predetermined threshold.

Therefore, the Schrock reference does not teach or suggest each and every element of the claimed invention and the Examiner is respectfully requested to withdraw this rejection of claims 11-22.

IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing amendments and remarks, and the agreement reached during the August 10, 2005, telephone interview, Applicant respectfully submits that claims 1-22, all the claims presently pending in the Application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the

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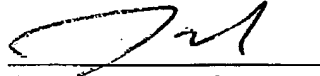
above application to issue at the earliest possible time.

Should the Examiner find the Application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date:


8/15/05

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CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that I am filing this Amendment Under 37 CFR §1.116 by facsimile with the United States Patent and Trademark Office to Examiner Tung S. Lau, Group Art Unit 2863 at fax number (571) 273-8300 this 15th day of August, 2005.



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